



### 10.1.3 Practice: Modeling: Constructing a Square Practice Name: Isaiah

**Singh Date: 5/4/2020**

ALS Geometry *Points Possible: 20*

#### **YOUR ASSIGNMENT: Garden Party**

Francesca is planning a new garden for her community center. She wants her design to include two of her favorite shapes: the square and the circle. She wants to have two different types of flowers in the garden and to arrange them in a square that is inscribed in a circle. You will use the Compass Tool to bring her design to life.

#### **Creating the circle**

1. Let's start the design. First, mark the center of the circle by making a tiny dot with the Compass Tool.
2. Next, place the center of the Compass Tool on the dot you made. Draw the circle.
3. Switch to the Straightedge. Using the blue pencil, draw a horizontal line through your dot in the center of the circle. Sketch the result below. (**4 points:** 2 points for the circle, 2 points for the diameter)
4. **Constructing the perpendicular bisector**

Now, select the blue pencil in the Compass Tool and create a perpendicular bisector of the diameter of your circle. Place the center of the compass on one of the points where the diameter intersects the circle. Adjust the compass so that the pencil tip extends beyond the center of the circle. Draw an arc through the circle. Repeat this on the other side without changing the radius of your compass tool. Using the straightedge tool, draw a line through the intersections of the two arcs. (**8 points:** 4 points for correctly constructing the arcs, 4 points for constructing the bisector)

5. **Is it a square? Answer: Yes**
6. How can you be certain that the angles you have created form a square inside the circle? (**4 points** for a thorough explanation)